

3.11 Transportation

This section evaluates impacts of the proposed Project related to traffic congestion, traffic or pedestrian hazards, inadequate emergency access, excess parking demand compared to proposed parking capacity, and inconsistency of the Project with adopted County policies, plans, and programs supporting alternative transportation. Traffic analyses were conducted and a technical report addressing transportation impacts was prepared to support this EIR (see **Appendix I**). Cumulative transportation impacts were also analyzed and addressed, and are presented in Section 5.0 of this EIR, Cumulative, Growth-Inducing, and Irreversible Impacts.

Environmental Setting

Primary access to the Project site will be provided via Canal Street. The Project access point onto Canal Street would be stop controlled, with stop signs along the Project Access Roadway to Canal Street. Canal Street traffic would be uncontrolled. A system of two-lane internal residential streets is proposed to provide access and connectivity between the Project site and public streets. Streets will have a pavement (travel) width of 32 feet, with curb, gutter, and sidewalk, within a 46-foot wide right-of-way. A four-foot wide sidewalk will be provided on each side of all streets.

Secondary emergency access is proposed from the west across one of the two existing bridges and easements over the Wise Canal.

The community is proposed to be gated and future homeowners will be responsible for the maintenance of the private streets within the Project site.

Pedestrian and Bicycle Facilities

There is no sidewalk along Canal Street adjacent to or south of the Project site. There is a sidewalk along the eastern edge of Canal Street north of the Canal Street/Shاونsetta Court intersection, approximately 600 feet north of the proposed Project access point. There is also a sidewalk along the western edge of Canal Street, immediately north of the Project site. There are no nearby hiking trails or pedestrian pathways separated from roadways.

The *Placer County Regional Bikeway Plan* provides for a regional system of bikeways for both transportation and recreational purposes. The Bikeway Plan was accepted by the Placer County Transportation Planning Agency (PCTPA) Board in August of 2001. Bikeways to be provided in the Auburn area include:

- **Luther Road** - Class III bike lanes along the entire length of the roadway segment.
- **State Route 49 (S.R. 49)** - Class II bike lanes along SR 49 from north of Bell Road to Lincoln Way.

Class II and Class III bike lanes within the *Placer County Regional Bikeway Plan* are defined as follows:

“Class II Bike Lane – Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicular parking and cross flows by pedestrians permitted. Caltrans standards generally require a four foot (1.2 meters) bike lane with a six-inch (150 millimeter) white stripe separating the roadway from the bike lane.”

“Class III Bike Lane – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists. Roadways designated as Class III bike routes should have sufficient width to accommodate motorists, bicyclists, and pedestrians. Other than a street sign, there are not special markings required for a Class III bike route.”

The City of Auburn *Bikeway Master Plan* establishes a system of ultimate bikeways along the following roadway in the immediate vicinity of the proposed Project:¹

- **Dairy Road** – Currently, bicyclists share the roadway with auto traffic along this roadway. It is proposed to upgrade the entire length of the roadway with a Class II bike lane.

Transit

Local transit service is provided by Placer County Transit (PCT). PCT provides five bus routes and a dial-a-ride service. The Highway 49/North Auburn Loop is one of the five bus routes provided by the County that traverses the Project vicinity (see **Figure 3.11-1**). The location where the bus stops closest to the proposed Project site is at the intersection of S.R. 49 and Luther Road, approximately 600 feet west of the Luther Road/Canal Street intersection.

Other local and regional inter-city transit services available within the City of Auburn and Placer County include the following:

- **Placer Commuter Express** is a ticket based bus service traveling from convenient stops (including Auburn Station) along the I-80 corridor from Colfax into Downtown Sacramento.
- **Auburn Transit Service (ATS)** operates two bus routes designated as the Blue Route and Red Route, which are available to the general public. The bus stop nearest the Project site is at the Bowman Road Greyhound Station approximately 1.5 miles from the Luther Road/Canal Street intersection.
- **Gold Country Stage** is a Nevada County transit service which provides ten routes within Nevada County and extensions into the surrounding area. Among the routes provided is Route 5 – Auburn/ Route 5X – Highway 49 Express which connects the Grass Valley Community with the Auburn community.
- **Dial-A-Ride** is a demand-response transportation system providing curb-to-curb service to the general public six days a week (excluding Sunday) in the communities of Auburn (S.R. 49) and Rocklin/Loomis, and five days a week (Monday through Friday) for the Granite Bay community.
- **Auburn Light Rail Express Route** is a fixed route transit service which connects Auburn Station to Sacramento Light Rail. The route operates Monday through Friday with one hour headways and two hour headways on Saturdays.

Consult www.placer.ca.gov/works/pct/pct.htm for information on bus stops and schedules.

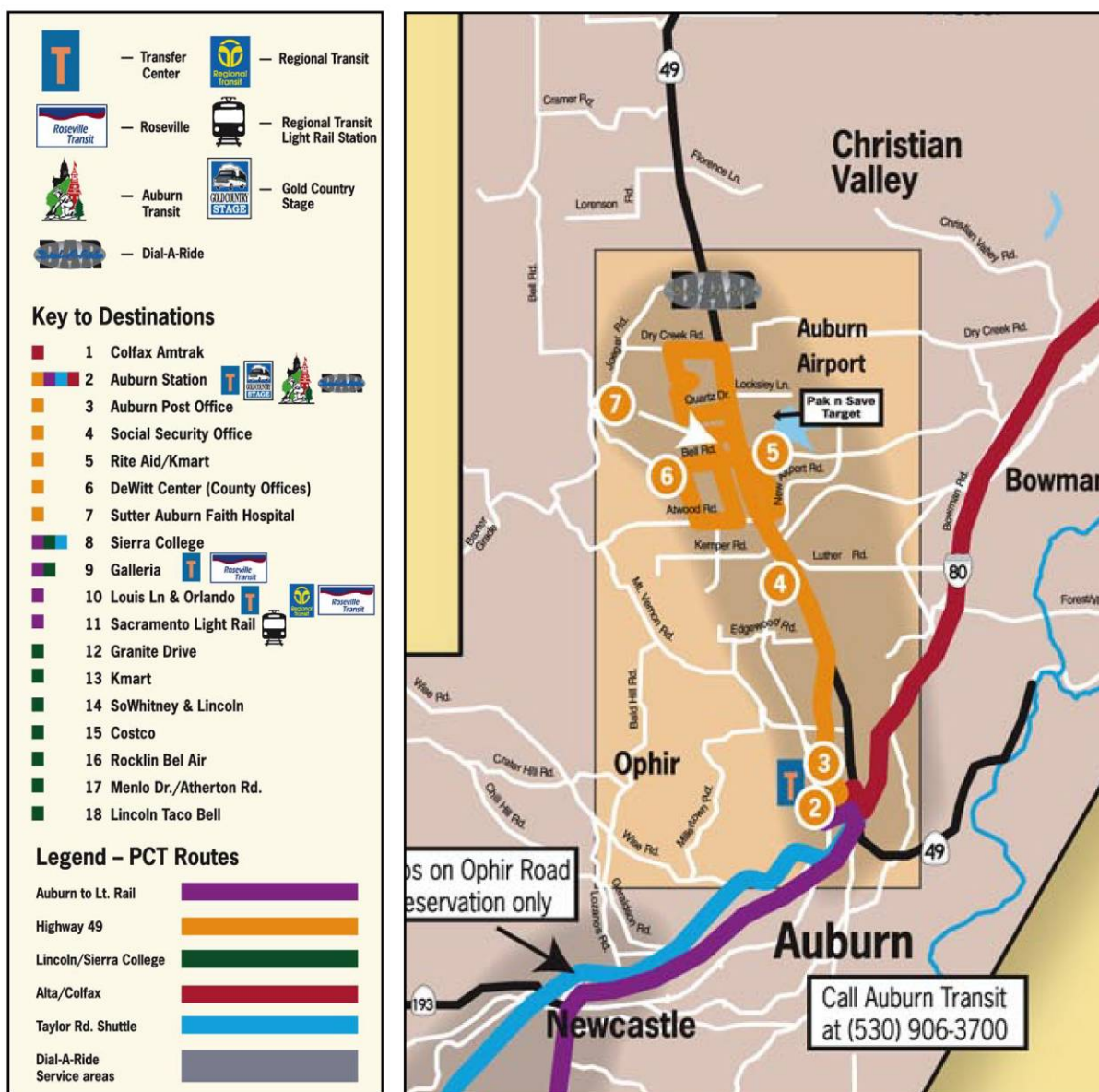


Figure 3.11-1
Transit Service in Project Vicinity

Vehicular Traffic

Figure 3.11-2 illustrates the location of roadways, intersections, and other circulation features in the vicinity of the Project site and existing lanes for each intersection approach.

S.R. 49 is a five-lane (four-lane divided) major arterial (highway) that connects Auburn with the communities of Nevada City and Grass Valley to the north. To the south, it connects with Interstate 80, which is the major east-west freeway commuter facility in the region. The segment of S.R. 49 in the immediate vicinity of the Project site features signalized intersections at Luther Road and New Airport Road/Kemper Road.

Luther Road is a two-lane arterial facility east of S.R. 49, and a two-lane collector facility west of S.R. 49. West of S.R. 49, Luther Road provides access to various commercial developments on the northwest corner of S.R. 49/Luther Road, and a residential area and mobile home park further to the west. Luther Road extends east of S.R. 49 as a two-lane arterial (with dedicated turning lanes) in the vicinity of the proposed Project, where it provides access to commercial properties near S.R. 49. East of S.R. 49 past Canal Street, the roadway provides access to residential areas. Luther Road terminates at a “T” intersection with Bowman Road near the Interstate 80/Bowman Road interchange.

Hulbert Way is a U-shaped two-lane collector road with two connections to S.R. 49. Just north of Luther Road, Hulbert Way (south) extends west from S.R. 49, then curves north, parallel to SR 49 for approximately 300 feet. The roadway then turns right to travel east to intersect S.R. 49 as Hulbert Way (north). Hulbert Way provides access to various commercial properties, including an automobile dealership.

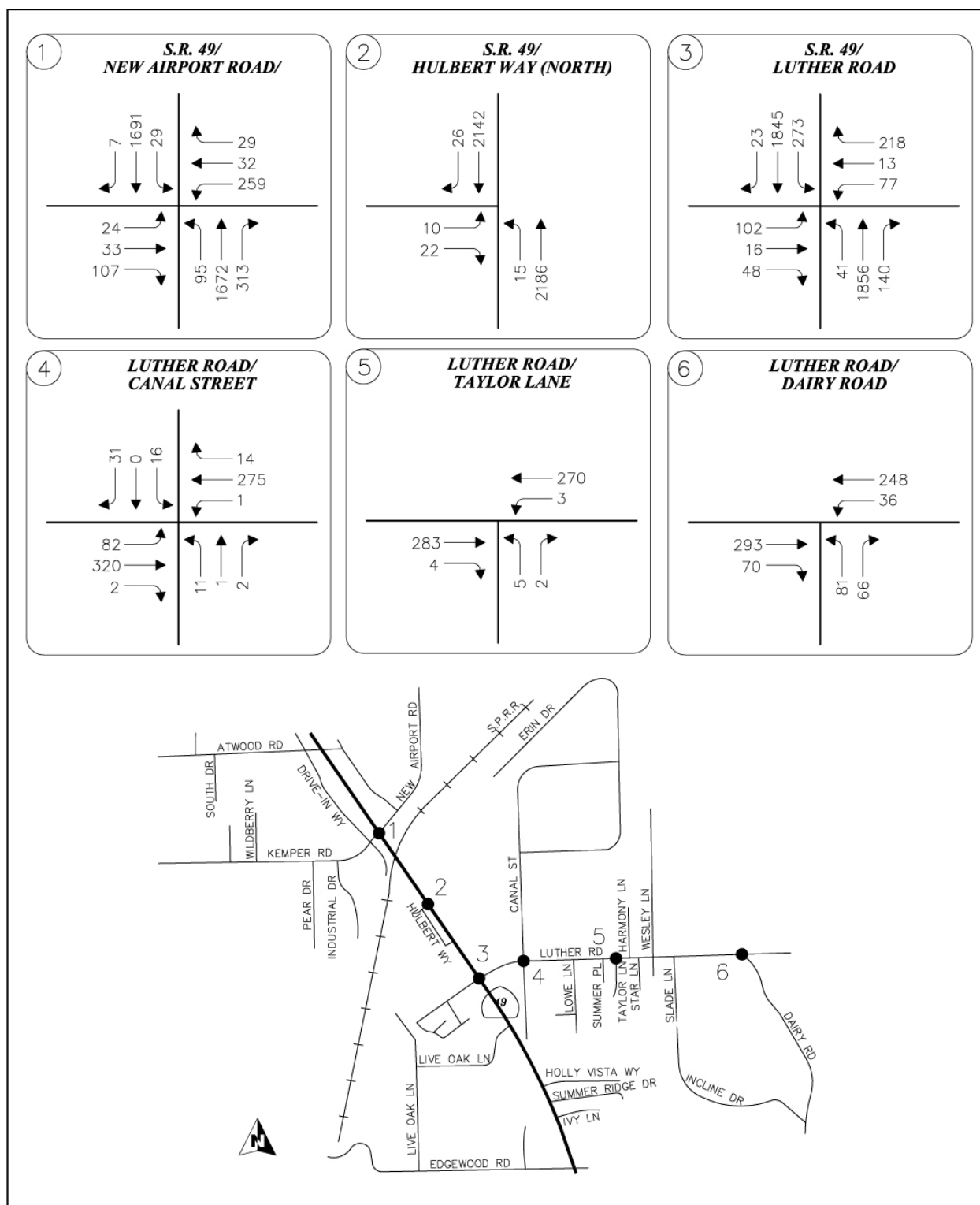
Canal Street is a two-lane collector road located approximately 600 feet east of S.R. 49 that extends north and south from Luther Road. North of Luther Road, Canal Street provides access to residential areas, and would ultimately provide access to the future Bohemia Subdivision Project. South of Luther Road, Canal Street extends through a predominately industrial area with mixed commercial development, then dead ends approximately 750 feet south of Luther Road.

Taylor Lane is a two-lane collector road located approximately ¼ mile east of S.R. 49. The roadway extends south from a “T” intersection with Luther Road, terminating at a cul-de-sac. The Taylor Lane/Luther Road “T” intersection is currently stop-sign controlled along all three approaches.

Dairy Road is a two-lane collector road located approximately ½ mile east of S.R. 49, which extends south from a “T” intersection with Luther Road. Dairy Road provides connection between Luther Road to the north and Auburn Ravine Road to the south, and traverses through a predominately residential area. The Dairy Road/Luther Road “T” intersection is stop-sign controlled for all three approaches. Left and right turn lanes are provided for each intersection approach.

Study Intersections

The following list of critical study intersections and roadway segments were selected in coordination with Placer County for analysis presented in this EIR.



Source: Omni-Means, LTD., 2005, Adapted by P&D Consultants, 2005.

Figure 3.11-2
Existing Afternoon Peak-Hour
Traffic Volumes

1. S.R. 49 / Hulbert Way (North)
2. S.R. 49 / Luther Road
3. Luther Road / Canal Street
4. Luther Road / Taylor Lane
5. Luther Road / Dairy Road

Study Roadways

The following roadway segments, selected in coordination with the Placer County staff, were analyzed on a daily volume-to-capacity ratio basis:

1. S.R. 49 – South of Luther Road
2. S.R. 49 – North of Luther Road
3. S.R. 49 – North of New Airport Road
4. Luther Road – S.R. 49 to 500 feet east of Canal Street

Existing Traffic Volumes

Existing traffic counts were collected in February 2005 at the study intersections and along the study roadways listed previously. Weekday afternoon peak-hour turning movement volume counts were taken at the six critical study intersections. The afternoon peak hour is defined as the one-hour of peak traffic flow counted between 4:00 P.M. and 6:00 P.M. on a typical weekday. For the roadway segments, the daily traffic counts were obtained over a continuous 24-hour period on a typical weekday and were used to establish average daily traffic (ADT) volumes.

Table 3.11-1 summarizes LOS based on the current daily traffic volumes on study area roads. **Table 3.11-2** describes LOS criteria for roadway segments. Segments along S.R. 49 operate at LOS F on a daily basis with the existing capacity configurations. The segment on Luther Road east of S.R. 49 currently operates at acceptable LOS A based on daily volume-to-capacity thresholds.

Table 3.11-1
Existing Roadway Segment Level of Service

Roadway	Location	Facility Classification	Target LOS	Existing Conditions	
				Daily Volume (ADT)	LOS
Luther Rd.	– east of S.R. 49	2-Lane Arterial (with left-turn lane)	C	9,750	A
S.R. 49	– south of Luther Rd.	4-Lane Divided Arterial (with left-turn lane)	E	50,400	F
S.R. 49	– north of Luther Rd.	4-Lane Divided Arterial (with left-turn lane)	E	52,800	F
S.R. 49	– north of New Airport Rd.	4-Lane Divided Arterial (with left-turn lane)	E	41,000	F

Notes: ADT = Average Daily Traffic

Bolded entries indicate roadway segments operating at unacceptable LOS.

Table 3.11-2
Level of Service Criteria for Roadways

Roadway Type	Average Daily Traffic (ADT) in Both Directions				
	LOS A	LOS B	LOS C	LOS D	LOS E
6-Lane Divided Arterial (with left-turn lane)	32,000	38,000	43,000	49,000	54,000
4-Lane Expressway (high access control)	24,000	28,000	32,000	36,000	40,000
4-Lane Divided Arterial (with left-turn lane)	22,000	25,000	29,000	32,500	36,000
4-Lane Undivided Arterial (no left-turn lane)	18,000	21,000	24,000	27,000	30,000
2-Lane Arterial (with left-turn lane)	11,000	12,500	14,500	16,000	18,000
2-Lane Arterial (no left-turn lane)	9,000	10,500	12,000	13,500	15,000
2-Lane Collector	6,000	7,500	9,000	10,500	12,000

LOS = Level of Service

- Notes:
1. Based on *Highway Capacity Manual, Fourth Edition*, Transportation Research Board, 2000.
 2. All volume thresholds are approximate and assume ideal roadway characteristics. Actual thresholds for each Level of Service listed above may vary depending on a variety of factors including (but not limited to) roadway curvature and grade, intersection or interchange spacing, driveway spacing, percentage of trucks and other heavy vehicles, lane widths, signal timing, on-street parking, volume of cross traffic and pedestrians, etc.

Existing Intersection LOS

Table 3.11-3 summarizes current LOS at study area intersections during the P.M. (4:00 to 6:00 P.M.) peak traffic demand period. Intersection LOS criteria are described in **Table 3.11-4**. As shown in **Table 3.11-4**, all study intersections were found to be currently operating at acceptable levels of service during the PM peak hour period, with the exception of S.R. 49/Hulbert Way (north) intersection. The unsignalized intersection of S.R.49/Hulbert Way (north) currently operates unacceptably at LOS F during the PM peak hour based on the delay along the worst approach, which is the eastbound Hulbert Way approach. The left turns along S.R. 49 at this intersection operate at an unacceptable LOS F during the PM peak hour period. The intersection currently operates overall at acceptable LOS A during the PM peak hour, when the delays for all movements are averaged together. The intersection does not meet Caltrans peak hour volume signal warrant criteria for existing conditions during the PM peak hour period.

**Table 3.11-3
Existing Peak-Hour Intersection Level of Service**

Location	Control	Target LOS	PM Peak Hour		Traffic Signal Warranted?
			LOS	Average Delay	
S.R. 49 / New Airport Rd. / Kemper Rd	Signal	E	D	40.2	N/A
S.R. 49 / Hulbert Way (north)	Two-Way-Stop Control	E	F	Overflow conditions – delays > 100 seconds.	no
S.R. 49 / Luther Rd.	Signal	E	D	39.7	N/A
Luther Rd. / Canal St.	Two-Way-Stop Control	C	C	19.2	no
Luther Rd. / Taylor Ln.	All-Way-Stop Control	C	A	9.8	no
Luther Rd. / Dairy Rd.	All-Way-Stop Control	C	B	10.8	no

Notes: **Bolded** entries indicate intersections operating at deficient LOS (see note #2)

1. Two-Way-Stop Control intersections LOS and delay are based on LOS and delay for worst approach; All-Way-Stop Control intersections LOS and delay are based on average LOS and delay for the entire intersection.
2. Target LOS threshold is C for City of Auburn and Placer County intersections. Target LOS threshold is E for S.R. 49 (Caltrans) study intersections.
3. Warrant = Caltrans peak hour-volume based signal warrant

Regulatory Setting

The LOS minimum standard for roadways and intersections is generally LOS C, according to the *Placer County General Plan*. Land development projects are required to sustain LOS C at all roadway and intersection locations for as long as possible. The County General Plan also indicates that LOS D shall be the standard within a half-mile of State highways.

The proposed Project site is included within the *Auburn/Bowman Community Plan*, thus LOS policies consistent with that plan were utilized to complete the traffic analysis. Additionally, appropriate methodologies as included within the *Caltrans Guide for the Preparation of Traffic Impact Studies* (June 2001) were also utilized. The *Auburn/Bowman Community Plan* Section V-C (Policies) is partly quoted below:

- 5) The level of service (LOS) minimum standard for roadways and intersections throughout the Plan area shall generally be LOS C. Exceptions to this standard are listed in Table 17. Land development improvement requirements shall be set to sustain LOS C at all roadway and intersection locations for as long as possible.

**Table 3.11-4
Level of Service Criteria for Placer County Intersections**

LOS	Type of Flow	Delay	Maneuverability	Signal V/C	Delay/Vehicle (sec)	
					Unsignalized ¹	All-Way Stop
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 0.6	≤ 10.0	≤ 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>0.6 and ≤ 0.7	>10 and ≤ 15.0	>10 and ≤ 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>0.7 and ≤ 0.8	>15 and ≤ 25.0	>15 and ≤ 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>0.8 and ≤ 0.9	>25 and ≤ 35.0	>25 and ≤ 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>0.9 and ≤ 1.0	>35 and ≤ 50.0	>35 and ≤ 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 1.0	> 50.0	> 50.0

References:

1. Operations method in Transportation Research Board Circular 212, Interim Materials on Highway Capacity, 1980. 2. Highway Capacity Manual, Special Report No. 209, Transportation Research Board, Third Edition, Updated December 2000.

Notes: 1) Minor Street Stopped Delay for one or more movements...

There is a different set of LOS standards for intersections along S.R. 49, described in detail in the transportation **Appendix I** to this EIR.

Based upon Table 17 of the *Auburn/Bowman Community Plan*, the following LOS thresholds for acceptable traffic operations were utilized at each of the study intersection locations:

Intersection.....	Acceptable LOS
S.R. 49/New Airport Rd. / Kemper Rd.....	E*
S.R. 49/Hulbert Way (North).....	E*
S.R. 49/Luther Rd.	E
Luther Rd. / Canal St.....	C
Luther Rd. / Taylor Lane	C
Luther Rd. / Dairy Rd.....	C
<p>The S.R. 49 intersections at New Airport Road and Hulbert Way (North) are not listed in Table 17 of the <i>Auburn/Bowman Community Plan</i>. However, the S.R. 49 intersections at New Airport Road and Hulbert Way (North) fall along the S.R. 49 segment between Atwood Road and Edgewood Road, and the acceptable Level of Service for the roadway segment on S.R. 49 as outlined in Table 17 of <i>Auburn/Bowman Community Plan</i> is LOS E. Therefore, consistent with the roadway Level of Service and prior studies completed by Omni-Means (The Home Depot EIR Traffic Study, July 2004 and The Plaza Traffic Study, November 2004), LOS E is considered acceptable for the two S.R. 49 intersections at New Airport Road and Hulbert Way (North).</p>	

As outlined in Table 17 of the *Auburn/Bowman Community Plan*, the following LOS thresholds were used for S.R. 49 and Luther Road arterial segments.

Segment	Acceptable LOS
S.R. 49 – South of Luther Road.....	E
S.R. 49 – North of Luther Road.....	E
S.R. 49 – North of New Airport Road	E
Luther Road – East of S.R. 49	C

Methodology

The traffic analysis conducted to support this EIR includes the following scenarios:

- Scenario 1.** Existing Traffic Conditions
- Scenario 2.** Short-Term No Project Conditions (Existing + Approved/Pending Projects Scenario)
- Scenario 3.** Short-Term plus Project Conditions (Existing + Approved/Pending + Project Scenario)
 - without Hulbert Way Connection (this connection is described later)
 - with Hulbert Way Connection
- Scenario 4.** Cumulative No Project Conditions (see Section 5.0 of this EIR)
- Scenario 5.** Cumulative plus Project Conditions (see Section 5.0 of this EIR)
 - without Hulbert Way Connection (this connection is described later)
 - with Hulbert Way Connection

Short-term conditions assume completion of approved and pending projects in the study area. Short-term conditions assume that some programmed or planned roadway and intersection improvements might be completed. *The Short-Term No Project Scenario* investigates traffic operations following completion of approved and pending projects, excluding development of the proposed Project. The

Short-Term plus Project Scenario analyzes the impacts of the proposed Project compared to the *Short-Term No Project Scenario*.

Cumulative conditions assume buildout of approved/pending projects in the year 2020. *The Cumulative No Project Scenario* investigates traffic operations following build out, excluding development of the proposed Project. *The Cumulative plus Project Scenario* analyzes the impacts of the Project relative to long-term future traffic conditions.

Traffic operations have been quantified through the determination of Level of Service (LOS), as described earlier. Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade A through F is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. A more detailed description of methodology is included in the transportation appendix to this EIR, **Appendix I**.

The following additional analysis methodologies were established in coordination with Placer County and Caltrans and utilized to complete the traffic analysis:

The *2000 HCM Operations* methodology was used for the analysis of intersections that fall within Caltrans right-of-way. For Caltrans intersections, the *2000 HCM Operations* methodologies were implemented utilizing *Synchro Software* in order to simulate and evaluate an interconnected, and coordinated traffic signal system along S.R. 49 between Luther Road and New Airport Road/Kemper Road. Current timing plans for the S.R. 49 study intersections obtained from Caltrans were integrated into the coordinated signal system analyses. The existing conditions operational analysis within this study was performed utilizing the timing plans obtained from Caltrans. However, the afternoon peak-hour operations for Short Term and Cumulative conditions both with and without the Project were evaluated based on an optimized coordinated traffic signal system in order to minimize vehicular delay and improve traffic progression along S.R. 49 through the study area.

For signalized (County) intersections, planning methods documented in *Transportation Research Board Circular 212, Interim Materials on Highway Capacity*, 1980, were used. The default capacity thresholds (saturation flow rates) recommended by *Circular 212 Planning* were utilized in the traffic analysis.

For un-signalized (County) intersections, *Highway Capacity Manual, Special Report No. 209*, Transportation Research Board, Third Edition, Updated 2000, was used. The *2000 HCM Un-signalized* methodology was used for both two-way-stop controlled (TWSC) and all-way-stop controlled (AWSC) intersections.

For all County intersections, the *Circular 212 Planning* methodology and the *2000 HCM Un-signalized* methodology were implemented utilizing *Traffix 7.7* software. Roadway segments were analyzed on a daily volume-to-capacity ratio basis based upon existing/proposed capacity configurations and access control along the study roadway segments.

Currently, Hulbert Way (North) is located only to the west of S.R. 49 and connects to S.R. 49 as a "T" intersection. Two future access driveways are planned to extend east from S.R. 49 into the proposed Plaza Shopping Center (which is located immediately west of the proposed Bohemia Subdivision Project). Of the two Project driveways, the northern Project driveway would be aligned

directly opposite of the existing Hulbert Way (North) leg in such a way that it would constitute a new east side leg to the existing S.R. 49/Hulbert Way intersection.

The analysis conducted to support this EIR considers the following Project access alternatives:

(1) without Hulbert Way Connection – Sole access to and from the Project site would be provided via Canal Street. The preliminary site plan shows that access would be provided via an access roadway connecting Canal Street as a new “T” intersection.

(2) with Hulbert Way Connection – Under this alternative, a secondary access to the Project site would provide access to the Bohemia Subdivision via the easterly extension of Hulbert Way. Henceforth, this secondary access will be called Hulbert Way Connection. Per County staff direction, neither the primary access from Canal Street, nor the alternative Hulbert Way Connection, would have gates, since the objective is to increase access and improve connectivity. In addition to the redistribution of Project trips associated with the inter-connection, a portion of the traffic to/from areas north of Project site along Canal Street heading to northbound S.R. 49 would be diverted from Canal Street, Luther Road, and S.R. 49 (between Luther Road and Hulbert Way) to the new secondary access. In addition to the redistribution of Project trips associated with the Hulbert Way Connection, a portion of traffic to/from S.R. 49 south of Luther Road heading to areas north of Project site along Canal Street would be diverted from Luther Road and Canal Street to S.R. 49 (between Luther Road and Hulbert Way) and the new secondary access.

The majority of assumptions regarding future S.R. 49 improvements, and other improvements along study roadways and intersections that are assumed to be in place for Short Term Conditions, are based on information contained in the following documents:

- *Project Plans for Construction of State Highway in Placer County from Fulweiler Avenue to Quartz Drive*. This is commonly known as the “Operational Improvement Project” or “OIP”;
- *Conditions of approval for the “The Plaza Shopping Center” project* (OMNI-MEANS, November 2004); and,
- *Pavement Delineation Plans* provided by Dokken Engineering (June 2005) being prepared for the “The Plaza Shopping Center” project.

S.R.-49. According to the Operational Improvement Project (OIP) plans, northbound S.R. 49 would be widened from two lanes to three lanes beginning approximately 370 feet south of Luther Road, with three lanes continuing north through Luther Road. The third lane would end approximately 450 feet north of Luther Road, with the roadway continuing north with two through lanes. After passing beneath the railroad overcrossing, the roadway would again widen to three lanes in the northbound direction beginning approximately 350 feet south of the Airport Road/Kemper Road intersection. These three lanes would continue north through Atwood Drive, with the third lane dropping immediately north of the intersection. With the construction of The Plaza, it is planned that S.R. 49 would be further improved to provide the third northbound through lane beneath the railroad overcrossing, thus completing the widening of northbound S.R. 49 to three through lanes from south of Luther Road to north of Atwood Drive.

Southbound S.R. 49 will be widened from two lanes to three lanes from north of Bell Road south through the Airport Road/Kemper Road intersection. The third lane would end south of Airport Road/Kemper Road, with the roadway continuing south with two through lanes under the railroad overcrossing and beyond through Luther Road. The OIP also provides for the widening of S.R. 49 to accommodate an additional southbound left-turn lane at the Luther Road/S.R. 49 intersection. With the construction of The Plaza, it is planned that S.R. 49 would be further improved tying into OIP improvements immediately south of Airport Road/Kemper Road such that a third southbound through lane would continue south beneath the railroad overcrossing. This third southbound lane would continue south through the intersections of Hulbert Way (North) and Luther Road, and would end approximately 300 feet south of the Luther Road intersection.

Luther Road -The segment of Luther Road between S.R 49 and Canal Street is currently designated as a two-lane arterial with turn channelizations. With the implementation of OIP, the eastbound Luther Road segment would be widened to two lanes for a distance of approximately 250 feet east of the S.R. 49/Luther Road intersection (450 feet west of Canal Street), while the westbound Luther Road approach to S.R. 49 will be widened to accommodate an exclusive left-turn lane.

S.R. 49/Luther Road intersection. As described above, the OIP provides for the widening of S.R. 49 and Luther Road along approaches to the S.R. 49/Luther Road intersection as follows:

- Widening of the southbound S.R. 49 approach to accommodate an additional southbound left-turn lane;
- Widening of the westbound Luther Road approach to S.R. 49 to accommodate an exclusive left-turn lane; and,
- Widening of eastbound Luther Road departing from the intersection to accommodate two through lanes for a distance of approximately 250 feet.

S.R. 49/Hulbert Way (North) intersection. With the construction of The Plaza, the S.R. 49/Hulbert Way (North) intersection will be improved as follows:

- Signalization of the intersection;
- One left-turn lane, three through lanes, and one right-turn lane in the northbound direction;
- One left-turn lane, three through lanes, and one right-turn lane in the southbound direction;
- One left-turn lane and a shared through-right lane in the eastbound direction; and,
- Two left-turn lanes and a shared through-right lane in the westbound direction;

Trip Generation

The number of automobile trips generated by the Project was estimated using applicable trip generation rates from the Institute of Transportation Engineers (ITE) publication, *Trip Generation* (Seventh Edition). **Tables 3.11-5** and **3.11-6** present the trip generation rates used for this analysis together with the resulting number of trips estimated to be generated with buildout of the Project. The Project will generate a total of 1,192 daily trips, with 123 trips occurring during the P.M. peak-traffic hour.

**Table 3.11-5
Trip Generation Rates**

Land Use	Daily Rate	PM Peak Hour Rates		
		Rate	% In	% Out
Single-Family Detached Housing	10.27 per dwelling unit	1.06	63	37

Source: Institute of Transportation Engineers. *Trip Generation*, 7th Edition.

**Table 3.11-6
Trips Generated**

Land Use	Quantity	Daily Trips	PM Peak Hour Trips		
			Total	In	Out
Single-Family Residential	116*	1,192	123	77	46

Source: Institute of Transportation Engineers. *Trip Generation*, 7th Edition.

Note: The traffic impact analysis assumes 116 residential lots though now 114 are proposed. The traffic impacts of 116 and 114 lots are virtually identical and the analysis and reporting on traffic impact in this EIR is adequate to report on the case of 114 residential lots, as proposed.

Trip Distribution

Having determined the number of trips generated by development of the Project site, it is necessary to identify the directional distribution of Project traffic. The directional trip distribution and assignment of Project-generated trips was estimated based on an understanding of existing and projected future traffic flows and travel patterns within the vicinity of the Project site, the location of other similar facilities, and the location of local and regional housing and employment/commercial centers in relation to the proposed Project site. The directional trip distribution for the proposed Project is as follows:

- 45 percent to/from the south on S.R. 49
- 22 percent to/from the north on S.R. 49
- Five percent to/from the east on New Airport Road
- 25 percent to/from the east on Luther Road
- Three percent to/from the south on Dairy Road (via Luther Road)

The trip distribution on a vicinity-wide basis is the same whether or not the County approves a through connection via Hulbert Way, though local trips are redistributed somewhat.²

Thresholds of Significance

Impacts would be considered significant if the Project would:

- Cause an increase in traffic resulting in intersection or roadway level of service exceeding local standards (T-1);

- Exceed either individually or cumulatively, a level of service standard established by the County congestion management agency or Caltrans for designated roads or highways (T-1);
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (T-2);
- Result in inadequate emergency access (T-2);
- Result in inadequate parking capacity (T-3); or,
- Conflict with adopted policies, plans, or programs supporting alternative transportation (T-4).

Environmental Impact and Mitigation Measures

Impact T-1 Reduction in Level of Service

Short Term plus Project without Hulbert Way Intersections

As previously mentioned, the impact analysis presented here assumes not only completion of approved and pending projects in the study area, but also programmed or planned roadway and intersection improvements, including potentially some transportation infrastructure improvements that would serve Project related traffic. Please refer to **Appendix I** for more detail.

With development of the Project, during the afternoon peak hour period, all three S.R. 49 study intersections will operate at LOS C, and all Luther Road study intersections will operate at LOS B with the exception of the Luther Road/Canal Street intersection. The newly created intersection of Canal Street/Project Access Roadway would operate at LOS A. Vehicle trips to and from the Project site during construction would affect congestion during peak demand periods at nearby intersections and roadway segments.

The unsignalized intersection of Luther Road/Canal Street is projected to operate at unacceptable LOS D during the afternoon peak-hour period under Short Term plus Project (without Hulbert Way) conditions based on the delay along the worst approach, which is northbound Canal Street (**Table 3.11-7**). The intersection is projected to operate at acceptable LOS C during the afternoon peak-hour period under Short Term No Project (without Hulbert Way) conditions, the addition of Project traffic would increase the delay along the northbound Canal Street approach by 8.2 seconds and will cause the levels of service to degrade to unacceptable LOS D. The intersection does not meet Caltrans peak-hour volume warrant criteria during the afternoon peak hour under Short Term plus Project (without Hulbert Way) conditions. This is a **potentially significant** impact that requires mitigation.

Unacceptable LOS conditions at the Luther Road/Canal Street intersection are experienced only by the northbound minor street traffic. The intersection does not meet Caltrans peak-hour volume warrant criteria during the afternoon peak hour under Short Term plus Project (without Hulbert Way Connection) conditions. The addition of Project vehicles coupled with the limited sight distance along this portion of Luther Road could create safety issues. Per County staff direction, this intersection will be signalized for Short Term plus Project (without Hulbert Way Connection)

conditions. The Auburn/Bowman Community Plan and the corresponding Capital Improvements Program have envisioned the need for signal control at the intersection. If signalized, the intersection would operate at acceptable LOS B. Conversion of this two-way stop controlled intersection to an all-way stop controlled intersection would accommodate Short Term plus Project without Hulbert Way traffic volumes and work as a short-term solution.

Table 3.11-7
Short Term plus Project (without Hulbert Way) Intersection Levels of Service

#	Intersection	Control Type ¹	Target LOS ²	PM Peak Hour		
				Delay (sec)	LOS	Warrant Met? ³
1	S.R 49 / New Airport Rd / Kemper Rd	Signal	E	32.5	C	---
2	S.R 49 / Hulbert Way (north)	Signal	E	27.3	C	---
3	S.R 49 / Luther Rd	Signal	E	30.6	C	---
4	Luther Rd / Canal St	TWSC	C	32.0	D	no
5	Luther Rd / Taylor L.	AWSC	C	11.6	B	no
6	Luther Rd / Dairy Rd	AWSC	C	14.7	B	no
7	Canal St / Project Access	TWSC	C	8.7	A	no

Notes: **Bolded entries indicate intersections operating at deficient LOS (see note #2)**

1. TWSC = Two-Way-Stop Control (LOS and delay are based on LOS and delay for worst approach); AWSC = All-Way-Stop Control (LOS and delay are based on average LOS and delay for the entire intersection); Signal = Traffic Signal Control (LOS and delay are based on average LOS and delay for the entire intersection)

2. Target LOS threshold is C for City of Auburn and Placer County intersections. Target LOS threshold is E for S.R. 49 (Caltrans) study intersections.

3. Warrant = Caltrans peak hour-volume based signal warrant

The following mitigation is required:

Mitigation Measure T-1 (required only without Hulbert Way Connection)³

- The Project shall construct a full-phase traffic signal at the intersection of Luther Road and Canal Street.
- Construction activity, such as delivery of building materials and equipment that could affect adjacent traffic operations shall be scheduled for off-peak hours.

ADVISORY COMMENT: The current County Capital Improvement Program (CIP) for the Auburn/Bowman community plan area includes the above mentioned signal project. Article 15.28 of County Code provides the Director of Public Works with the ability to reconsider credit against fee obligation for construction of improvements from the capital improvement program by new development. The Director has considered the specifics of the traffic signal's construction with the proposed development and agrees to apply "fee credit" to the future traffic mitigation fees required by County Code Article 15.28 for the Bohemia Subdivision. The fee credit applied to future building permits, associated with the subdivision construction, shall be limited to the amount identified in the most recent CIP; currently \$204,700 (updated July 2006).

With mitigation, the impact is considered **less than significant**.

Short Term plus Project (without Hulbert Way) Segments

The Luther Road segment east of S.R. 49 is projected to operate at acceptable LOS B on a daily basis. Two of the three study roadway segments along S.R. 49 would exceed LOS standards on a daily basis (even with a six-lane facility) on S.R. 49 under Short Term plus Project (without Hulbert Way) conditions.

As with Short Term No Project conditions, the S.R. 49 segments to the north and south of Luther Road intersection are projected to operate at unacceptable LOS F on a daily basis. With the implementation of the Operational Improvement Project (OIP) plans and improvements proposed as part of The Plaza Shopping Center, S.R. 49 will be widened to a six-lane facility in the study area. The S.R. 49 segment north of New Airport Road would operate acceptably for Short Term plus Project (without Hulbert Way) conditions with an improved six-lane facility. **Table 3.11-8** summarizes roadway segment LOS under this scenario.

Table 3.11-8
Short Term plus Project (without Hulbert Way) Intersection
Level of Service

Roadway Segment#	Capacity Configuration	Target LOS	ADT Volumes	LOS
Luther Rd – east of S.R. 49	2-Lane Arterial (with left-turn lane)	C	11,900	B
S.R. 49 – south of Luther Rd	6-Lane Divided Arterial (with left-turn lane)	E	57,440	F
S.R. 49 – north of Luther Rd	6-Lane Divided Arterial (with left-turn lane)	E	60,620	F
S.R. 49 – north of New Airport Rd	6-Lane Divided Arterial (with left-turn lane)	E	49,760	E

Note: ADT = Average Daily Traffic
Bolded entries indicate roadway segments operating at unacceptable LOS.

No additional feasible improvements to the S.R. 49 corridor would improve the levels of service. The impact is **significant and unavoidable**.

Short Term plus Project with Hulbert Way Intersections

Table 3.11-9 provides a summary of the Short Term plus Project (with Hulbert Way Connection) peak-hour intersection levels of service. All of the study intersections are projected to operate at acceptable levels of service with the Hulbert Way connection.

The signalized intersection of S.R. 49/New Airport Road/Kemper Road that was found to be operating at acceptable LOS C during the afternoon peak hour under Short Term No Project conditions will

degrade to acceptable LOS D with the addition of Project traffic with the Hulbert Way connection. The addition of Project traffic would increase the intersection delay by 2.9 seconds.

The signalized intersection of S.R. 49/Hulbert Way (north) that was found to be operating at acceptable LOS C during the afternoon peak hour under Short Term No Project conditions will degrade to acceptable LOS D with the addition of Project traffic with the Hulbert Way connection. The addition of Project traffic would increase the intersection delay by 8.7 seconds.

Table 3.11-9
Short Term plus Project (with Hulbert Way) Intersection
Level of Service

#	Intersection	Control Type ²	Target LOS ²	PM Peak Hour		
				Delay (sec)	LOS	Warrant Met? ³
1	S.R. 49 / New Airport Rd / Kemper Rd	Signal	E	35.1	D	---
2	S.R. 49 / Hulbert Way (north)	Signal	E	35.4	D	---
3	S.R. 49 / Luther Rd	Signal	E	27.5	C	---
4	Luther Rd / Canal St	TWSC	C	20.4	C	no
5	Luther Rd / Taylor Ln	AWSC	C	11.6	B	no
6	Luther Rd / Dairy Rd	AWSC	C	14.7	B	no
7	Canal St / Project Access	TWSC	C	10.0	A	no

- Notes: 1. TWSC = Two-Way-Stop Control (LOS and delay are based on LOS and delay for worst approach).
AWSC = All-Way-Stop Control (LOS and delay are based on average LOS and delay for the entire intersection).
Signal = Traffic Signal Control (LOS and delay are based on average LOS and delay for the entire intersection).
2. Target LOS threshold is "C" for City of Auburn and Placer County intersections. Target LOS threshold is "E" for S.R. 49 (Caltrans) study intersections.
3. Warrant = Caltrans peak hour volume based signal warrant.

The signalized intersection of S.R. 49/Luther Road that was found to be operating at acceptable LOS C during the afternoon peak hour under Short Term No Project conditions will continue to operate at acceptable LOS C. Project traffic would increase delay by 0.8 seconds with the Hulbert Way connection.

The two-way stop intersection of Luther Road/Canal Street that was found to be operating at acceptable LOS C during the afternoon peak hour under Short Term No Project conditions will continue to operate at acceptable LOS C. Project traffic would increase delay by 0.8 seconds with the Hulbert Way connection.

The all-way stop intersection of Luther Road/Taylor Lane that was found to be operating at acceptable LOS B during the afternoon peak hour under Short Term No Project conditions will continue to operate at acceptable LOS B. Project traffic would increase the average intersection delay by 0.4 seconds with the Hulbert Way connection.

The all-way stop intersection of Luther Road/Dairy Road that was found to be operating at acceptable LOS B during the afternoon peak hour under Short Term No Project conditions will continue to

operate at acceptable LOS B. Project traffic would add 0.7 seconds of average delay with the Hulbert Way connection.

The newly created intersection of Canal Street/Project Access Roadway would operate at LOS A. With the Hulbert Way connection, the intersection impact is considered **less than significant** and no mitigation is necessary.

Short Term plus Project with Hulbert Way Segments

Table 3.11-10 summarizes Short Term plus Project (with Hulbert Way Connection) roadway segment LOS conditions. Two of the three study roadway segments along S.R. 49 are projected to experience unacceptable operations on a daily basis with a six-lane facility on S.R. 49 under Short Term plus Project (with Hulbert Way Connection) conditions. As with Short Term No Project conditions, the S.R. 49 segments to the north and south of the Luther Road intersection are projected to operate at unacceptable LOS F on a daily basis. Similar to what was noted for Short Term No Project conditions, the S.R. 49 segment north of New Airport would operate acceptably for Short Term plus Project (with Hulbert Way Connection) conditions with an improved six-lane facility.

As with Short Term No Project conditions, the Luther Road segment east of S.R. 49 is projected to operate at acceptable LOS, with LOS improving to LOS B on a daily basis due to the provision of the Hulbert Way Connection. As with the without Hulbert Way Connection scenario, the impact is considered **significant and unavoidable**.

Table 3.11-10
Short Term plus Project (with Hulbert Way Connection) Roadway Segment
Level of Service

Roadway Segment#	Capacity Configuration	Target LOS	ADT Volumes	LOS
Luther Rd – east of S.R. 49	2-Lane Arterial (with left-turn lane)	C	10,510	A
S.R. 49 – south of Luther Rd	6-Lane Divided Arterial (with left-turn lane)	E	57,440	F
S.R. 49 – north of Luther Rd	6-Lane Divided Arterial (with left-turn lane)	E	59,900	F
S.R. 49 – north of New Airport Rd	6-Lane Divided Arterial (with left-turn lane)	E	49,760	E

Note: ADT = Average Daily Traffic
Bolded entries indicate roadway segments operating at unacceptable LOS.

Impact T-2 Emergency Access/Design Hazard

Development projects may create hazardous conditions by introducing areas of potential pedestrian/automobile conflict or by providing inadequate turning radii or roadway width for vehicular movements anticipated on-site. Problems with alignment of existing and proposed points of access can also create potentially hazardous conditions.

Under both the with and without Hulbert Way Connection scenarios, the newly created intersection along Canal Street would be stop controlled, with stop signs along the Project access roadway approach. Canal Street traffic would be uncontrolled. Analysis shows that the newly created access intersection will operate acceptably for all analysis scenarios.

The Project involves construction of access points to Canal Street, internal access roadways, driveways, and internal pedestrian circulation features. The design of the access points from Canal Street will require an encroachment permit from the County and will be required to meet improvement standards, which are designed to ensure safety.

There are no unusually sharp turns or narrow access points shown on the site plan that describes Project circulation features.

The proposed Project site plan includes an internal three-legged intersection approximately 160 feet west of Canal Street. Inbound traffic would be directed in a northwest direction toward the internal three-legged intersection, with traffic continuing either due north or due west along internal roadways. For outbound vehicles, stop control would exist along the north and west legs, such that vehicles would stop before proceeding towards Canal Street.

Adequate emergency access is not defined by levels of service at intersections or roadways under peak use conditions, but rather is based on the ability of emergency vehicles to quickly and adequately serve portions of the Project site.

Each proposed building envelope is approximately 25 feet from the proposed residential access roads. Driveways will be required through existing regulations/standards to provide a travelable surface closer to proposed structures that could be used by emergency vehicles. No unusually sharp curves or narrow passageways would prevent travel within very close proximity of all proposed buildings. Impacts to fire suppression and law enforcement services are presented in the Public Services, Utilities, and Recreation section of this EIR (Section 3.8) to further reduce impacts to fire repression services. The Project would be required to comply with all Placer County fire standards and the Uniform Fire Code.

Without the through connection, the Project proposes a gated entrance, which must be designed to the standards of the Fire District's local requirements which are more stringent than the County standards and Uniform Fire Code (see **Figure 2-2**). For outbound vehicles, vehicles would stop along the north and west legs before proceeding towards the gate where they would activate a detector to open the gate. The gated access would also provide a turnaround between the gate and Canal Street. The turning radius within the turnaround would accommodate standard passenger vehicles (including sport utility vehicles), but would not provide sufficient turning radius for an SU-30 (or larger) design vehicle, or fire trucks. The without Hulbert Way Connection scenario would require secondary emergency access from the west across one of the two existing bridges and easements over the Wise Canal.

For the with Hulbert Way Connection alternative, no gate would exist since the public streets within the Project site would provide access between Canal Street and S.R 49.

The configurations of intersections and the "L"-shaped turns within the proposed Project constitute a **potentially-significant** design hazard unless mitigated. The following mitigation would ensure a less than cumulatively considerable and **less-than-significant** impact:

Mitigation Measure T-2

- The Project shall have stop sign control at all “T” intersections, with stop signs on minor approaches.
- The Project shall provide directional signage for internal residential streets that operate as “L”-shaped turns (only permitted under the without Hulbert Way connection scenario, as no non-MUTCD [Manual on Uniform Control Devices] signs are permitted with County right-of-way).

Impact T-3 Parking Demand

The Project will be required by the County to provide parking in accordance with Section 10.052 of the Placer County Zoning Ordinance, which generally requires two off-street parking spaces for each dwelling unit, with certain exceptions. Parking requirements included in the Zoning Ordinance are designed to accommodate local parking demand requirements. Other uses proposed on-site do not attract vehicle trips that would create any problem with unmet parking demand.

Compliance with existing regulations will ensure a **less-than-significant** impact.

Impact T-4 Conflicts with Alternative Transportation Modes

Section 3.6 of this EIR analyzes the consistency of the Project with policies that were adopted with the intent of reducing potential environmental impacts of development projects. This section includes an analysis of Project consistency with policies adopted to promote alternatives to automobile travel.

The Project without the Hulbert Way Connection does not provide any pathways along or through the site that would allow any alternative forms of transportation between the Project site and surrounding areas. If the with Hulbert Way Connection alternative is approved, the access roads to and from S.R. 49 will be required to be designed to accommodate pedestrian activity.

Though the Project does not propose to accommodate any through-site alternative transportation modes or add to the pedestrian or bicycle transportation system in this part of the County, neither does implementation of the Project conflict with specific bicycle, pedestrian, or equestrian plans in the vicinity. Fair share financial contributions towards the development of regional bicycle facilities will be satisfied by the Project’s calculated payment of fees for the *Auburn-Bowman Community Plan’s* Transportation Capital Improvement Program (CIP). This CIP specifically provides for development of bikeway facilities consistent with the Bikeways Master Plan. With this existing requirement, the impact is considered **less than significant**.

Notes and References

- ¹ City of Auburn. *Bicycle Master Plan*. April 2002.
- ² Please refer to the Traffic Impact Study prepared to support this EIR, contained in its entirety in Appendix I.
- ³ A representative of the Project applicant notes that, “the applicant agreed to install the signal with County funding of \$195,000.” Ron Clundt Memo to Leah Rosasco dated August 8, 2006.